Please replace the paragraph beginning at page 20, line 6 with the following rewritten paragraph:

--In addition to a variety of seating states for objects in the passenger compartment, the trial database will also include environmental effects such as thermal gradients caused by heat lamps and the operation of the air conditioner and heater. A sample of such a matrix is presented in FIGS. 24A-24H, with some of the variables and objects used in the matrix being designated or described in FIGS. 18-23D. After the neural network has been trained on the trial database, the trial database will be scanned for vectors that yield erroneous results (which would likely be considered bad data). A study of those vectors along with vectors from associated in time cases are compared with the photographs to determine whether there is erroneous data present. If so, an attempt is made to determine the cause of the erroneous data. If the cause can be found, for example if a voltage spike on the power line corrupted the data, then the vector will be removed from the database and an attempt is made to correct the data collection process so as to remove such disturbances.--

Please replace the paragraph beginning at page 20, line 24 with the following rewritten paragraph:

--The next set of data to be collected is the training database. This will be the largest database initially collected and will cover such setups as listed, for example, in FIGS. 24A-24H. The training database, which may contain 500,000 or more vectors, will be used to begin training of the neural network. While this is taking place, additional data will be collected according to FIGS. 20-22 and 25 of the independent and validation databases. The training database has been selected so that it uniformly covers all seated states that are known to be likely to occur in the vehicle. The independent database may be similar in makeup to the training database or it may evolve to more closely conform to the occupancy state distribution of the validation database. During the neural network training, the independent database is used to check the accuracy of the neural network and to reject a candidate neural network design if its accuracy, measured against the independent database, is less than that of a previous network architecture.--

REMARKS

Entry of this amendment and reconsideration of the present application, as amended, are respectfully requested.

The specification has been amended to refer to FIGS. 23A-23D, which in combination constitute original FIG. 23, and FIGS 24A-24H which in combination constitute original FIGS. 24A-24F.

No new matter has been added and no new issues are raised by the changes. As such, this amendment should be entered.

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The issue fee has not yet been paid.

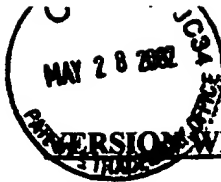FOR THE APPLICANTS
Respectfully submitted,

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Enc.
Version with Markings to Show Changes Made
Proposed Formal Drawings of Figs. 1-40/Letter to Draftsman

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U.S. PATENT APPLICATION SER. NO. 09/853,118
ACCOMPANYING AMENDMENT OF MAY 15, 2002

In The Specification:

Paragraphs inserted at page 18, line 11 have been amended as follows:

[FIG. 23 is] FIGS. 23A-23D show a chart showing different vehicle configurations for use in training of combination neural network in accordance with the invention.

FIGS. [24A-24F] 24A-24H show a training set collection matrix for training a neural network in accordance with the invention.

Paragraph beginning at page 20, line 6 has been amended as follows:

In addition to a variety of seating states for objects in the passenger compartment, the trial database will also include environmental effects such as thermal gradients caused by heat lamps and the operation of the air conditioner and heater. A sample of such a matrix is presented in FIGS. [24A-24F] 24A-24H, with some of the variables and objects used in the matrix being designated or described in FIGS. [18-23] 18-23D. After the neural network has been trained on the trial database, the trial database will be scanned for vectors that yield erroneous results (which would likely be considered bad data). A study of those vectors along with vectors from associated in time cases are compared with the photographs to determine whether there is erroneous data present. If so, an attempt is made to determine the cause of the erroneous data. If the cause can be found, for example if a voltage spike on the power line corrupted the data, then the vector will be removed from the database and an attempt is made to correct the data collection process so as to remove such disturbances.

Paragraph beginning at page 20, line 24 has been amended as follows:

The next set of data to be collected is the training database. This will be the largest database initially collected and will cover such setups as listed, for example, in FIGS. [24A-24F] 24A-24H. The

training database, which may contain 500,000 or more vectors, will be used to begin training of the neural network. While this is taking place, additional data will be collected according to FIGS. 20-22 and 25 of the independent and validation databases. The training database has been selected so that it uniformly covers all seated states that are known to be likely to occur in the vehicle. The independent database may be similar in makeup to the training database or it may evolve to more closely conform to the occupancy state distribution of the validation database. During the neural network training, the independent database is used to check the accuracy of the neural network and to reject a candidate neural network design if its accuracy, measured against the independent database, is less than that of a previous network architecture.